WILL DETER

SUMMARY

Data-driven strategist with expertise in computational modeling, predictive analytics, and operational optimization. Skilled in leveraging Python, SQL, and Power BI to develop scalable solutions that enhance decision-making and efficiency. Experienced in designing data-driven frameworks for strategic planning, process automation, and risk assessment. Adept at translating complex data into actionable intelligence, improving system performance, and aligning insights with organizational goals. Seeking to apply analytical expertise to solve high-impact problems in a data-driven environment.

EDUCATION

PhD Binghamton University, Systems Science (Anticipated) May 2027

Advisor: Hiroki Sayama
Research Area: Organizational Evolution in NK Landscapes

MS Binghamton University, Systems Science May 2023

Advisor: Hiroki Sayama
Thesis: Behavioral and Topological Heterogeneities in Network Models of Segregation

Advanced Graduate Certificate December 2022
Binghamton University, Complex Systems Science and Engineering

BS Western Carolina University, Emergency and Disaster Management May 2020
Graduated Summa Cum Laude

PROFESSIONAL EXPERIENCE

YMCA of Western North Carolina 2013 - Present

Ten plus years of progressively responsible experience in leadership roles. Added value through the implementation of custom management information systems and computational modeling of operations and services.

Data Science & Business Intelligence Lead 2024 - Present

- Developed and optimized multiple data pipelines in Power BI, streamlining ETL processes and enabling real-time business insights while building organizational support and buy-in for data-driven decision making leading to a paradigm shift in strategic and operational management.

- Designed and implemented a safety inspection log system, increasing compliance with inspection frequency by 60% leading to improved risk management.
- Developed and launched a company-wide intranet to modernize knowledge management practices increasing monthly engagement with content by 400%.
- Automated administrative processes, streamlining workflows and reducing manual effort, resulting in cost savings equivalent to 3 FTEs and improved operational efficiency.
- Developed and deployed a data-driven decision support tool for service scheduling, enabling managers to optimize service delivery, improve alignment with customer needs, and redistribute demand to non-peak hours, enhancing operational efficiency.
- Conducted a comprehensive CRM evaluation and developed a multi-year modernization plan.
- Developed and deployed several flask applications where integrations were not otherwise available to provide advanced functionality such as machine learning, natural language processing, and data transformation.
- Developed machine learning models to support fund development with prospect identification in imbalanced datasets.
- Performed geospatial analyses of the primary service area to support the Board of Directors and C-Suite with long-term strategic planning.

Senior Director of Operations 2019 – 2024

- Developed and launched custom management information systems to efficiently monitor and maintain compliance with regulatory requirements.
- Contributed substantially to state-level regulatory and legislative advocacy efforts in the licensed childcare space securing favorable regulatory reform.
- Supervised Child and Adult Care Food Program (CACFP) implementation as a sponsoring organization of 31 affiliated centers with budget responsibility exceeding $500k.
- Managed a team of 2 full-time administrative coordinators.

Director of Operations 2016 - 2019

- Lead safety and compliance operations contributing to the success of 34 licensed or otherwise grant-funded childcare facilities serving more than 1000 youth.
- Facilitated the licensure of 8 additional school-age childcare facilities.

Youth Development Manager – Licensing 2015 - 2016

- Supported the success of 16 licensed childcare facilities serving over 700 youth.

RESEARCH EXPERIENCE

A Measure of Interactive Complexity in Network Models 2024
Northeast Journal of Complex Systems

Behavioral and Topological Heterogeneities in Network Models of Segregation 2023
Thesis

Advisor: Hiroki Sayama

- Extended computational models of residential segregation to investigate the effect of multiple dimensions of heterogeneity in model specification.
- Articulated novel insights to dynamical processes which aid understanding of segregation on networks.
- Accepted at NetSci 2023 Vienna

PROFESSIONAL TRAINING & CERTIFICATIONS

Disciplined Agile Scrum Master, PMI January 2021

The Disciplined Agile Scrum Master credential holder has been formally evaluated on understanding the fundamentals of agile and lean approaches like Scrum, Agile Modeling, Extreme Programming, Kanban, Agile Data, SAFe and more, in a tailorable and scalable manner.

TECHNICAL SKILLS

Methods

- Machine Learning (Supervised & Unsupervised Learning, Classification, Regression, Clustering)
- Evolutionary Algorithms (Optimization, Genetic Programming)
- Natural Language Processing (Sentiment analysis, topic models)
- Network Models (Dynamical Networks, Graph Analysis, Social Network Analysis)
- Statistical Inference (Hypothesis Testing, Bayesian Methods)
- A/B Testing & Experimentation (Controlled Experiments, Causal Inference)

Programming

- Python (NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, NetworkX, TensorFlow/PyTorch)
- SQL (Query Optimization, ETL, Data Warehousing)
- DAX & M (Power BI & Data Transformation)
- NetLogo & Vensim (Agent-Based & System Dynamics Models)

Tools & Platforms

- Microsoft Fabric
- Microsoft Power Platform
- ArcGIS